

True AI

- 10
15

relating to said financial scenario for use by said engine, and further wherein said graphical user interface is operable to display said date information in graphical form on said display screen.

6. The financial scenario modeling and analysis tool of claim 5, wherein said tool enables said date information to be entered using a natural date language, said engine being operable to process said date information from said natural date language.

7. The financial scenario modeling and analysis tool of claim 4, wherein said instrument information constitutes either a fixed part of said financial scenario or a variable part of said financial scenario.

8. The financial scenario modeling and analysis tool of claim 1, wherein said graphical user interface enables said user to modify said graphical model of said financial scenario, and said engine is operable, in response to said modification of said graphical model, to modify said information in accordance with said modification of said graphical model.

9. The financial scenario modeling and analysis tool of claim 2, wherein said engine is operable, in response to said creation of said financial instrument graphic, to define roles for parties represented by said party graphics which are connected by said financial instrument graphic, wherein said roles are used by said engine to define said parties interaction with said financial instrument represented by said financial instrument graphic.

10. The financial scenario modeling and analysis tool of claim 7, wherein said engine is operable to determine an optimal result for said financial scenario relative to

at least one aspect of the scenario, and to calculate optimal values for each of said variables defined by said instrument data based on said optimal result.

11. The financial scenario modeling and analysis tool of claim 1, wherein said tool is operable to determine an optimal result for said financial scenario.

5 12. The financial scenario modeling and analysis tool of claim 10, wherein said graphical user interface is operable to display said optimal result to said user.

10 13. The financial scenario modeling and analysis tool of claim 2, wherein said tool includes a library of predefined financial instruments, and said graphical user interface enables said user to select and use one or more of said predefined financial instruments during creation of said graphical model of said financial scenario.

14. The financial scenario modeling and analysis tool of claim 2, wherein said engine is operable in response to creation of each of said party graphics to generate party-specific information on said party, said graphical user interface enabling said user to edit said party-specific information.

15 15. The financial scenario modeling and analysis tool of claim 14, wherein said tool includes a library of predefined party definitions, and further wherein said graphical user interface enables said user to select a party definition from said library of predefined party definitions.

20 16. The financial scenario modeling and analysis tool of claim 5, wherein said graphical user interface includes a worksheet section which enables said user to input scenario information which is independent of date and instrument information, and

further wherein said engine is operable to use said scenario information when modeling said financial scenario.

17. The financial scenario modeling and analysis tool of claim 16, wherein said worksheet is a non-cell based calculation interface wherein references used in calculations are based on a hierarchical outline and not on a positional reference.

18. The financial scenario modeling and analysis tool of claim 16, wherein said tool includes a formula language for use in creating said scenario information, said formula language including a library of predefined functions and keywords.

19. The financial scenario modeling and analysis tool of claim 18, wherein said engine is operable upon entry of said scenario information in said worksheet section to establish links between related scenario information and between scenario information and said date information, thereby establishing a dependence therebetween, and further wherein said engine is operable to use said links when modeling said financial scenario.

20. The financial scenario modeling and analysis tool of claim 18, wherein said tool includes a library of predefined worksheets for use in said worksheet section, said graphical user interface enabling said user to select said predefined worksheets from said library of pre-defined worksheets.

21. The financial scenario modeling and analysis tool of claim 19, wherein said formula language further includes a library of predefined prefixes for use in creating said scenario information.

22. The financial scenario modeling and analysis tool of claim 6, wherein said natural date language is used in said tool to specify either a single date or a series of dates relating to said financial scenario.

23. The financial scenario modeling and analysis tool of claim 22, wherein said tool enables a plurality of possible outcomes to be modeled based on different date information provided by said user.

24. The financial scenario modeling and analysis tool of claim 1, wherein said information is selected from the group consisting of : timelines, formulas, templates, parameters, constraints, optimizable parameters, cash flows, and reports.

25. A financial scenario modeling and analysis tool, comprising:
a graphical user interface which enables a user of said tool to create a graphical model of a financial scenario on a display screen; and

an engine operable, in response to creation of said graphical model, to generate information which at least partially models at least a part of said financial scenario using data collected by said engine during creation of said graphical model;

wherein said graphical user interface is presented on said display screen in a book-like configuration in which a plurality of different sections of said graphical user interface are represented by different chapters in said book-like configuration, each of said chapters having a tab graphic associated therewith, wherein upon selection of said tab graphic by said user, said user interface is operable to display said chapter associated therewith.

26. The financial scenario modeling and analysis tool of claim 25, wherein said tab graphics are located along a side of said display screen, and further wherein each chapter may include a plurality of pages, said pages having tab graphics which are displayed to said user when a chapter having said pages is selected by said user.

27. The financial scenario modeling and analysis tool of claim 25, wherein said chapters include a diagram chapter for creating said graphical model, a parties chapter for providing data relating to said parties, a time chapter for viewing and editing dates associated with said financial scenario, an instruments chapter for viewing and editing instrument data, a worksheet chapter for enabling said user to define formulas relating to said financial scenario, an optimization chapter for use in optimizing said financial scenario, a payment chapter for viewing payment flows in said financial scenario, and a reports chapter for enabling reports to be generated relating to said financial scenario:

28. A financial scenario modeling and analysis tool, comprising:
a graphical user interface which enables a user of said tool to create a graphical model of a financial scenario on a display screen; and
an engine operable, in response to creation of said graphical model, to generate information which at least partially models at least a part of said financial scenario using data collected by said engine during creation of said graphical model,
wherein said graphical user interface includes a worksheet section which enables said user to input scenario information relating to said financial scenario which is not expressly represented in said graphical model.

29. The financial scenario modeling and analysis tool of claim 28, wherein said worksheet section is a non-cell based calculation interface wherein references used in calculations are based on a hierarchical outline and not on a position reference.

30. The financial scenario modeling and analysis tool of claim 28, wherein said graphical user interface enables said user to create party graphics respectively representing parties to said financial scenario, and to generate financial instrument

graphics representing financial instruments, wherein each financial instrument graphic connects two of said party graphics, said party graphics and said financial instrument graphics comprising said graphical model of said financial scenario.

31. The financial scenario modeling and analysis tool of claim 28, wherein said tool includes a formula language for use in creating said scenario information, said formula language including a library of predefined functions and keywords.

32. The financial scenario modeling and analysis tool of claim 31, wherein said engine is operable upon entry of scenario information in said worksheet section to establish links between related scenario information and between scenario information and date information relating to said scenario, thereby establishing a dependence therebetween, and further wherein said engine is operable to use said links when modeling said financial scenario.

33. The financial scenario modeling and analysis tool of claim 31, wherein said tool includes a library of predefined worksheets for use in said worksheet section, said graphical user interface enabling said user to select worksheets from said library of pre-defined worksheets.

34. The financial scenario modeling and analysis tool of claim 31, wherein said formula language further includes a library of predefined prefixes for use in creating said scenario information.

35. The financial scenario modeling and analysis tool of claim 34, wherein said prefixes defines how a parameter in the model of said financial scenario is handled with reference to other parameters, causes automatic accrual, causes table look-up

operation, causes interpolation, causes extrapolation, specifies variability during optimization, causes a search, or causes a repetitive calculation.

36. The financial scenario modeling and analysis tool of claim 33, wherein said tool enables said user to define custom functions for use in creating said scenario
5 information.

37. A financial scenario modeling and analysis tool, comprising:
a graphical user interface which enables a user of said tool to create a graphical model of a financial scenario on a display screen; and
an engine operable, in response to creation of said graphical model, to
10 generate information which at least partially models at least a part of said financial scenario using data collected by said engine during creation of said graphical model;
wherein said graphical user interface enables said user to enter and define date information relating to said financial scenario for use by said engine, said graphical user interface being operable to display said date information in graphical
15 form on said display screen;
and further wherein said tool enables said date information to be entered using a natural date language, said engine being operable to process said date information from said natural date language.

38. The financial scenario modeling and analysis tool of claim 37, wherein said
20 natural date language is used in said tool to specify either a single date or a series of dates relating to said financial scenario.

39. The financial scenario modeling and analysis tool of claim 38, wherein said graphical user interface enables said user to create party graphics respectively

representing parties to said financial scenario, and to generate financial instrument graphics representing financial instruments, wherein each financial instrument graphic connects two of said party graphics, said party graphics and said financial instrument graphics comprising said graphical model of said financial scenario.

5 40. A mathematical scenario modeling and analysis tool, comprising:
a graphical user interface which enables a user of said tool to create a graphical model of a mathematical scenario on a display screen; and
an engine operable, in response to creation of said graphical model, to generate information which at least partially models at least a part of said
10 mathematical scenario using data collected by said engine during creation of said graphical model.

41. An electronic tool for performing mathematical calculations, comprising:
an information processing system; and
a graphical user interface for said information processing system;
15 wherein said graphical user interface is a non-cell based calculation interface which performs calculations using references which are based on a hierarchical outline and not a positional reference.

42. A method for computerized modeling of a financial scenario, comprising:
creating a graphical model of a financial scenario on a display screen; and
20 generating, in response to creation of said graphical model, information which at least partially models at least a part of said financial scenario using data collected during creation of said graphical model.

43. The method of claim 42, wherein said generating includes creating party graphics respectively representing parties to said financial scenario, and creating

001160 01002560

graphics representing financial instruments

nic connects two of said party graphics

ent graphics comprising said graphical

of claim 43, further including defining s

ationship, relative to said financial instr

ties connected by said financial instr

of claim 43, further including generating

l model, instrument information for each

and enabling said user to interact with

of claim 45, further including entering a

id financial scenario, and displaying sa

display screen.

of claim 46, further including using a na

on.

scenario modeling and analysis tool o

strument information to constitute eith

variable part of said financial scenario.

of claim 44, enabling said user to modif

and, in response to said modification

5

10

said user
 further incl

15

48. The financial scenario modeling and analysis tool of claim 45, further including defining said instrument information to constitute either a fixed part of said financial scenario or a variable part of said financial scenario.

20

model, automatically modifying said information in accordance with said modification of said graphical model.

50. The method of claim 43, further including defining, in response to said creation of said financial instrument graphic, roles for parties represented by said party graphics which are connected by said financial instrument graphic, wherein said roles are used to define said parties interaction with said financial instrument represented by said financial instrument graphic.

51. The method of claim 48, further including determining an optimal result for said financial scenario relative to at least one aspect of the scenario, calculating optimal values for each of said variables defined by said instrument data based on said optimal result.

52. The method of claim 42, further including determining an optimal result for said financial scenario.

53. The method of claim 48, further including displaying said optimal result to said user.

54. The method of claim 43, further including providing a library of predefined financial instruments, and enabling said user to select and use one or more of said predefined financial instruments during creation of said graphical model of said financial scenario.

55. The method of claim 43, further including generating, in response to creation of each of said party graphics, party-specific information on said party, and enabling said user to edit said party specific information.

56. The method of claim 55, further including providing a library of predefined party definitions, and enabling said user to select a party definition from said library of predefined party definitions.

57. The method of claim 46, further including enabling said user to input
5 scenario information which is independent of date and instrument information, and using said scenario information when modeling said financial scenario.

58. The method of claim 57, further including using a non-cell based calculation interface for entering said scenario information, wherein references used in calculations are based on a hierarchical outline and not on a positional reference.

59. The method of claim 57, further including providing a formula language for
10 use in creating said scenario information, said formula language including a library of predefined functions and keywords.

60. The method of claim 59, further including establishing links between
15 related scenario information and between scenario information and said date information, thereby establishing a dependence therebetween, and using said links when modeling said financial scenario.

61. The method of claim 59, further including providing a library of predefined calculations and enabling said user to select said predefined calculations.

62. The method of claim 60, further including providing a library of predefined
20 prefixes for use in creating said scenario information.

63. The method of claim 47, further including using said natural date language to specify either a single date or a series of dates relating to said financial scenario.

64. The method of claim 63, further including enabling a plurality of possible outcomes to be modeled based on different date information provided by said user.

65. The method of claim 42, wherein said information is selected from the group consisting of: timelines, formulas, templates, parameters, constraints,
5 optimizable parameters, cash flows, and reports.

66. A financial scenario modeling and analysis tool, comprising:
means for creating a graphical model of a financial scenario on a display screen; and

means for generating, in response to creation of said graphical model,
10 information which at least partially models at least a part of said financial scenario using data collected by said engine during creation of said graphical model.

67. The financial scenario modeling and analysis tool of claim 66, wherein said means for creating enables a user to create party graphics respectively representing parties to said financial scenario, and to create financial instrument
15 graphics representing financial instruments, wherein each financial instrument graphic connects two of said party graphics, said party graphics and said financial instrument graphics comprising said graphical model of said financial scenario.

68. The financial scenario modeling and analysis tool of claim 67, wherein said financial instrument graphics indicate a relationship, relative to said financial
20 instrument represented thereby, between said parties connected by said financial instrument graphic.

69. The financial scenario modeling and analysis tool of claim 67, wherein said means for generating generates, in response to said creation of said graphical model,

instrument information for each of said instruments in said graphical model, and said means for creating enables said user to interact with said instrument information.

70. The financial scenario modeling and analysis tool of claim 69, wherein said means for creating enables said user to enter and define date information relating to said financial scenario for use by said means for generating, and further wherein said means for creating is operable to display said date information in graphical form on said display screen.

71. The financial scenario modeling and analysis tool of claim 70, further including means for enabling said date information to be entered using a natural date language, said engine being operable to process said date information from said natural date language.

72. The financial scenario modeling and analysis tool of claim 69, wherein said instrument information constitutes either a fixed part of said financial scenario or a variable part of said financial scenario.

73. The financial scenario modeling and analysis tool of claim 66, wherein said means for creating enables said user to modify said graphical model of said financial scenario, and said means for generating is operable, in response to said modification of said graphical model, to modify said information in accordance with said modification of said graphical model.

74. The financial scenario modeling and analysis tool of claim 67, wherein said means for generating is operable, in response to said creation of said financial instrument graphic, to define roles for parties represented by said party graphics which are connected by said financial instrument graphic, wherein said roles are used

by said engine to define said parties interaction with said financial instrument represented by said financial instrument graphic.

75. The financial scenario modeling and analysis tool of claim 72, wherein said means for generating is operable to determine an optimal result for said financial scenario relative to at least one aspect of the scenario, and to calculate optimal values for each of said variables defined by said instrument data based on said optimal result.

76. The financial scenario modeling and analysis tool of claim 66, wherein said tool is operable to determine an optimal result for said financial scenario.

77. The financial scenario modeling and analysis tool of claim 75, wherein said means for creating is operable to display said optimal result to said user.

78. The financial scenario modeling and analysis tool of claim 67, wherein said tool includes a library of predefined financial instruments, and said means for creating enables said user to select and use one or more of said predefined financial instruments during creation of said graphical model of said financial scenario.

79. The financial scenario modeling and analysis tool of claim 67, wherein said means for generating is operable in response to creation of each of said party graphics to generate party-specific information on said party, said means for creating enabling said user to edit said party-specific information.

80. The financial scenario modeling and analysis tool of claim 79, wherein said tool includes a library of predefined party definitions, and further wherein said means

for creating enables said user to select a party definition from said library of predefined party definitions.

81. The financial scenario modeling and analysis tool of claim 70, wherein said means for creating includes a worksheet section which enables said user to input
5 scenario information which is independent of date and instrument information, and further wherein said means for generating is operable to use said scenario information when modeling said financial scenario.

82. The financial scenario modeling and analysis tool of claim 81, wherein said worksheet is a non-cell based calculation interface wherein references used in
10 calculations are based on a hierarchical outline and not on a positional reference.

83. The financial scenario modeling and analysis tool of claim 81, wherein said tool includes a formula language for use in creating said scenario information, said formula language including a library of predefined functions and keywords.

84. The financial scenario modeling and analysis tool of claim 83, wherein said
15 means for generating is operable upon entry of said scenario information in said worksheet section to establish links between related scenario information and between scenario information and said date information, thereby establishing a dependence therebetween, and further wherein said means for generating is operable to use said links when modeling said financial scenario.

20 85. The financial scenario modeling and analysis tool of claim 83, wherein said tool includes a library of predefined worksheets for use in said worksheet section, said means for creating enabling said user to select said predefined worksheets from said library of pre-defined worksheets.

5

10

89. The financial scenario modeling and analysis tool of claim 66, wherein said information is selected from the group consisting of: timelines, formulas, templates, parameters, constraints, optimizable parameters, cash flows, and reports.